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Interfaces vs. the Computational System in the Syntax of Focus

Introduction

Recent developments in syntactic theory, in particular the Minimalist Program (MP) put forward by Chomsky (1993, 1995), radically restrict the mechanisms and devices available for the description of prima facie syntactic phenomena. As a result, a variety of major well-known phenomena that have been accounted for within the Principles-and-Parameters (P&P) framework by processes of the syntactic component — such as Move alpha, feature-percolation, etc. — and by syntactic well-formedness conditions operating on the resulting representations — e.g., versions of the ECP, the *wh*-Criterion, etc. — turn out to be left with no obvious syntactic account within a minimalist conception of the computational system of the human language faculty. The radical restriction of derivations in particular by means of economy principles, and the limitation of the system to permit only bare output conditions (in the sense of Chomsky 1995), i.e., only conditions imposed on syntactic representations "externally", by properties of the systems of use, necessitate a reassessment of various previously uncontroversially "syntactic" phenomena. These restricions may lead to **reformulations of previous accounts in terms of the checking of some uninterpretable formal (morphological) feature within the computational system**, and they also may lead to consideration of possible **alternative accounts in terms of "interface strategies"**, i.e., accounts based on the interaction of the computational system (henceforth C_{HL}) with properties of the systems of use at the interfaces.

Such issues of the proper division of labour among different components/devices of the theory — just like at earlier stages of the development of generative grammar — are clearly empirical, and the choice is often quite subtle. For instance, a case presenting the above kind of choice within the MP is the issue of quantifier scope and its derivation via QR which in pre-minimalist versions of the theory had been widely accepted (since May 1977). In the minimalist framework of Chomsky (1993, 1995), where movement operations are claimed to take place only when forced by the need to check (delete) an uninterpretable morphological feature, the standard uniformly LF-movement-based (QR) account of quantifier scope needed to be, and in fact has been, revised. The following two major alternative proposals have emerged:

(a)   Postulation of specific formal features like [+Dist] and [+Univ], etc. that appear on

specific quantifiers (in English on *each*, *every*), and also on particular functional heads (e.g. $Dist^0$ heading a DistP) within the clause, and movement of the corresponding quantified expressions to the appropriate Spec position, crucially, driven by the need to check (i.e., delete) the uninterpretable [+Dist], [+Univ], etc. features on these functional heads (see Beghelli 1994, Beghelli and Stowell 1997).

(b)   An "interface economy"-based approach involving a non-driven/"optional", hence marked, movement of quantified phrases, which is permitted to apply in derivations — according to the notion of interface economy — just in case there is no other, more economical, way to derive the particular scope interpretation (see Fox 1994, Reinhart 1995).

The choice between these alternatives for quantifier scope is a major empirical issue yet to be resolved. The subject matter of the present paper is a different set of phenomena that turns out to present the same type of puzzle, namely, the phenomenon of Focus. Before turning to the discussion of this empirical domain however, it is important first to note that in fact there is more at stake in such cases than a choice between two competing analyses. Proposal (b) above involves some new, previously unexplored aspects of Chomsky's original formulation of the economy of derivations. Specifically, the notion of interface economy makes crucial use of Chomsky's (1993) global formulation of economy, according to which whole converging derivations arising from the same Numeration are compared in terms of economy, (primarily, in terms of the number of steps they consist of), choosing for each Numeration the shortest, hence most economical one of the set of converging derivations, and excluding all the rest. The interface economy proposal modifies this view by permitting particular economy violations, as "marked" processes, just in case they create an **otherwise unavailable output at the (LF) interface**. Now notice that if the interface economy approach to quantifier scope, or to some other phenomena, turns out to be empirically well-motivated, and superior to alternative accounts, such as e.g. the feature-checking-based proposal (a), then this particular "global" version of the conception of economy receives powerful support. On the other hand, if it turned out that the feature-checking-based analysis of quantifier scope is empirically superior to the interface-based approach, and, crucially, no other cases emerge arguing for the notion of interface economy, then obviously, no such conception is motivated, and this in turn may reinforce suggestions to reformulate Chomsky's (1993) global economy comparing full (converging) derivations, as local economy conditions, i.e., to eliminate "look-ahead" properties, and the computational complexity they involve, altogether (possibly along the lines proposed in Collins 1997).

In view of the significance of the above type of case in relation to the notion of economy, as well as in view of the obvious interest inherent in contrasting a purely C_{HL}-internal account with one utilizing an interface-strategy with respect to a variety of empirical domains, I will address in the present paper a fundamentally similar problem, namely the issue of the choice between C_{HL}-internal encoding vs. an interface-based account arising in the framework of the MP **with respect to the phenomenon of Focus in natural language**. In the course of the evolution of generative grammar, assumptions about the status and proper representation of Focus have undergone a number of changes. In recent years, the view that Focus is to be accounted for within the C_{HL} via syntactic

movement induced by checking of a formal feature [+Focus] on an F^0 functional head has been proposed — based on earlier work on the syntactic nature of Focus (see Section 1.1 below) — by Brody (1995), and has been widely assumed, e.g., by Rizzi (1995), Kenesei (1995), Choe (1995), É. Kiss (1996). At the same time, however, an alternative, unified PF-interface approach to Focus, has been put forward, by Reinhart (1995), based on Cinque's (1993) theory of phrasal stress. This alternative proposal involves no syntactic Focus feature, no category F^0 and no checking-driven syntactic operation. In the following discussion I will explore the controversial choice between a directly C_{HL}-internal and a PF-interface-based account for Focus **in light of the analysis of syntactic movements (displacements) that appear to be Focus-related**, i.e., processes that are apparently optional, apart from the fact that their output manifests systematic effects with respect to the Focus options of the sentence.

In Section 1, I will first outline the two types of alternative analyses and their respective motivations as assessed in previous research. As a preliminary descriptive classification, Section 2 will introduce a distinction between two types of potentially relevant movement processes: (a) "Focus-accommodating" movements (e.g. in Roche-mont's (1978) "stylistic" constructions, and the optional movements investigated recently by Zubizarreta (1993), such as, Directional/Locative Inversion and Light Predicate Raising) and (b) "Focus-licensing" movements (such as apparently obligatory overt Focus-movements to some unique designated "Focus position" observed in languages like Hungarian, Basque, etc.). Type (a) movements are arguably due to interface-needs, rather than to feature-checking; they are optional movements — hence economy violations as far as the C_{HL} is concerned — that are permitted only due to satisfying the need to create some particular Focus option at the PF interface which otherwise would necessitate a similarly uneconomical stress-shift operation, i.e., a deviation from the unmarked clausal stress pattern. The bulk of the paper — starting from Section 3–will discuss alleged Type (b) movements, drawing on data from Hungarian, which seem to present the most serious challenge for a PF interface account of Focus. It will be shown that contrary to appearances, an account of alleged "Focus-licensing" movements based on the checking of a feature [+Focus] carried by the focus element and serving as a trigger for PF and LF interpretation of focus is unmotivated, and in fact conceptually and empirically undesirable even in this case. Thus we will be led to the conclusion that UG does not manifest [+Focus]-checking-driven movements; this in turn suggests that there is no need for a formal feature [+Focus] at all. In Section 3, we will argue against English in-situ-Focus involving checking-driven covert movement. In Section 4, turning to the challenge of overt "Focus-movement", as in Hungarian, we show first that this indeed cannot be a Type (a) movement, since the structure and stress assignment it exhibits is contrary to the predicted unmarked (neutral) stress pattern. The Focus-phrase is raised to a hierarchically higher position to head an A-bar chain, creating potentially long-distance dependencies. It exhibits island effects and licenses PGs, hence constituting apparently powerful evidence against a PF-interface view of Focus, and in favor of direct syntactic encoding in C_{HL}. However sections 5 and 6 will demonstrate the inadequacy of a [+Focus]-feature postulated for the focus-stressed element driving this overt movement (to a Spec of FP) under checking theory. This will be argued (a) based on inconsistencies

with the pied-piping phenomena observed in known feature-checking-driven movements, (such as Wh and NEG in Webelhuth's 1992), (b) based on the prosodic realizations of narrow vs. projecting Focus manifested within the Focus-moved phrases, and their full parallelism with in-situ PF-based "information Focus", and (c) based on a unique semantic property of the Focus-moved phrases, namely "exhaustive identification" (EI). Furthermore, we will argue, contrary to earlier proposals (Kenesei 1995, É. Kiss 1996), that postulating a distinction between "Operator-Focus" involving [+Focus]-checking vs. PF-based "Information Focus" would lead to missing significant generalizations at the PF-interface. Instead, in Section 6 we propose to assume only a single type of Focus — corresponding to "Information Focus" — assigned uniformly at PF along the lines of the Cinque/Reinhart hypothesis. The alleged "Focus-movement" in the Hungarian-type case is claimed not to be driven by any [+Focus] feature. Instead it is attributed to: (a) the existence of an Exhaustive Identification (EI) operator in the language that is merged at the phrasal level with DPs and PPs occupying their Spec position (note Tsai's (1994) parallel analysis of the Q-operator in Japanese interrogatives) and (b) this operator corresponding to a strong feature on a clausal functional head EI^0 that needs checking by an EI-bearing DP/PP raised overtly to its Spec, and that (possibly due to its affixal nature in Hungarian) also triggers overt V-raising. The fact that this pre-V DP/PP bearing the EI operator seems to obligatorily contain a Focused element is assimilated to the phenomenon of "association with Focus", familiar from the case of adverbials like ONLY and EVEN, which require Focus to occur within the element's c-command domain. We will also address the fact that ONLY- but not EVEN-phrases undergo the alleged "Focus-movement", though both of them require Focus to occur in their domain in Hungarian too.

1. The two competing conceptions of the status of Focus

1.1 *Some background history*

The syntactically encoded view of Focus has traditionally asserted that Focus is an entity undergoing true syntactic processes, such as LF-movement giving rise to an operator — variable structure (an A-bar chain); the corresponding stress placement has been attributed to the presence of a syntactic F(ocus) marker or feature in S-structure representations which is realized as main clausal stress ("focus-stress") by stress-rules of the PF component. A variety of proposals for a syntactically encoded account of Focus have been developed since the '70s: for instance, Jackendoff's (1972) syntactic F-marker, Chomsky's (1976) LF-raising proposal, Horvath's (1981, 1986, 1995) formal feature [+Focus] and parameters of syntactic feature-assignment, Brody's (1990) FP projection and "Focus Criterion", Brody's (1995) and Rizzi's (1995) [+Focus] checking in Spec of FP.

The major reasons for the choice of direct syntactic encoding have been the following:

(1) a. ("narrow") Focus seemed to be able to appear freely on constituents in any structural position (in the English-type languages at least)

b. Chomsky's observation of apparent WCO effects induced by Focus, taken as evidence for the application of covert movement deriving a bound variable representation at LF, and

c. the fact that the T-model of grammar had no direct link between the PF and LF components, hence no direct way to match up the (allegedly) Focus-raised constituent of LF with the element to receive main stress at PF.

d. cross-linguistic observations revealing the existence of languages where the covert Focus-movement hypothesized by Chomsky (1976) based on English seemed to be instantiated in an overt manner, by the required pre-S-structure movement of Focus to a designated structural position, as e.g.in the widely discussed case of Hungarian.

In the P&P framework, this syntactic encoding was executed via the postulation of a formal syntactic feature [+Focus] proposed in Horvath (1981), and it was further argued that the assignment/licensing conditions of this feature — at least in "designated Focus" languages — are analogous to those observed with respect to more familiar syntactic features, such as (structural) Case (see Horvath 1986, 1995). Within the framework of Chomsky's (1995) MP, this conception of Focus as a formal feature has naturally led to reformulations of "Focus-movement" in terms of checking theory: the [+Focus] feature is claimed to project a functional category F(ocus)P, and overt and covert movement of Focus constituents is driven by the need of checking this (strong/weak) feature in the Spec position of the FP, on the analogy of certain accounts of overt vs. in situ *wh*-interrogatives. (e.g., Uriagereka 1995, Brody 1990, 1995).

The alternative, PF-interface-based conception of Focus dates back to Chomsky's (1971) proposal to determine Focus at PF as a constituent containing the "intonation center" of the clause. Essentially PF-based, syntax-external accounts of Focus have also been suggested e.g. in Rochemont (1978), Vallduví (1992), Roberts (1996) and others, but the dominant hypothesis in the syntactic literature on Focus has been that of syntactic encoding. Recently however, making use of a highly restrictive universal system of phrasal stress assignment developed by Cinque (1993), Reinhart (1995) has suggested that it is in fact possible to return to Chomsky's original conceptually appealing hypothesis. She proposes an interesting PF-based account of Focus relying crucially on a particular conception of economy within the general framework of Chomsky's MP. Her proposal treats Focus — both its "neutral" and its "marked"/"narrow" cases — as a unified phenomenon that is **not encoded syntactically in the C_{HL} at all, but rather arises exclusively at the PF interface** (as first suggested in Chomsky 1971). Based on the notion of interface economy, which crucially reinterprets the otherwise troublesome notion of "markedness" in terms of economy, this PF interface account of Focus is shown to have important empirical consequences — as e.g. in the notorious case of Dutch object scrambling — within a conceptually desirable, highly restrictive framework of assumptions (see Neeleman and Reinhart to appear).

But since such an interface-based analysis has not yet been shown to be compatible with some of the major phenomena that motivated the syntactically encoded account of the status of Focus widely accepted since the mid '70s, we are faced here with an obvious controversy.

The PF/stress-based account of Focus emerging from Cinque (1993) and Reinhart (1995) arguably constitutes the null hypothesis; it is the conceptually necessary minimum, as far as the representation of this notion is concerned. Under the view of focus as a PF issue, independently needed and attested principles of the C_{HL} determine the assignment of stress to a sentence. At the interface, this phonological property of sentences is taken advantage of, i.e., is utilized, by the systems of use, to facilitate communication: stress serves as the indicator of Focus, which in turn plays a major role in determining the appropriateness of the sentence to particular discourse contexts.

Specifically, Reinhart (1995) proposes that a universal stress-assignment procedure — the version of the Nuclear Stress Rule proposed by Cinque (1993) — determines phrasal stress within the C_{HL}, relying exclusively on syntactic constituent structure; subsequently, each derivation is associated with a set of possible foci — the "Focus set" — that is determined purely by the location of the main stress of the clause and by constituent structure. The members of this Focus set, "read off" of PF-representations, are all and only constituents which contain the main stress of the sentence as assigned by Cinque's stress rule (see (2)–(3) below); it then depends only on discourse conditions whether a derivation with a particular Focus selected from the associated Focus set is appropriate, i.e., usable or not, in a particular context.

(2)   Main stress according to the generalized stress rule of Cinque (1993) falls on the most deeply embedded constituent.

(3)   The focus set of IP consists of the constituents containing the main stress of IP, as determined by the stress rule (based on Neeleman and Reinhart to appear).

The problem that such stress-based theories of Focus — as e.g. Chomsky's (1971) — encountered was of course the availability of Focus on constituents that were not predicted to contain the main stress by a general stress rule (versions of the Nuclear Stress Rule), and hence could not be members of the Focus set defined on the basis of "neutral" stress; yet they sound perfectly natural, given appropriate context, as noted in (1a) above. Thus e.g. the unpredicted Focus choice in (4a) shows no detectable effect of "marked" status, relative to the predicted object-focus case in (4b). (Henceforth I will use bracketing to mark the relevant Focus constituent(s), and capitalization to indicate the item bearing the heaviest stress.)

(4)   Who has invited Mary?   Who has John invited?
    a.   [JOHN] has invited Mary.   b.   John has invited [MARY].

This is the "markedness-problem" that played a major role in the eventual abandonment of the early PF-based conceptions of Focus. Crucially, Reinhart's (1995) proposal removes this obstacle. Making use of the concept of interface economy, she argues that under an appropriate precise reinterpretation of the notion of "marked" derivatiom in the MP framework as one involving an economy violation, it in fact can be shown empirically that cases like subject-focus — as (4a) — which involve a departure from the predicted stress pattern and Focus-choice are indeed "marked". She assumes (based on

Cinque 1993) an optional "stress-shifting" operation in C_{HL} — either strengthening the stress on an element that does not bear the main stress, or destressing a stressed element — stated schematically as:

(5)   Relocate the main stress.

Such stress-shifts in the derivation clearly constitute economy violations: they are optionally "undoing" the effect of the general stress assignment procedure of the C_{HL}. Reinhart's interface economy approach crucially claims that whether such a violation of the economy of derivation does indeed result in an illegitimate derivation — hence actual ungrammaticality — depends on whether the resulting output satisfies some interface need (in our case some discourse need) that **would not be satisfied without the application of the uneconomical ("marked") operation**. Under this view, e.g. (4a) above has undergone the uneconomical operation of stress-strengthening placing main stress on the subject, instead of the object, which being the most deeply embedded element would bear it as a result of Cinque's general stress rule. The reason why this sentence still shows no sign of being "marked" or unacceptable is the fact that the operation creates a Focus option — namely, Focus of the subject alone — which otherwise would not be a member of the Focus set of this sentence; the stress predicted for the clause without stress-shift — see (4b) — would define its Focus set as {IP, VP, Object}.

An important source of potential empirical support for the interface economy proposal has to do with cases of cross-linguistic variation where constituents are permitted to surface in different hierarchical positions in different languages, and correspondingly, can receive different stress patterns by the application of Cinque's (unmarked) universal stress-assignment procedure, thus giving rise to different Focus sets under Reinhart's (1995) interface account of Focus. The prediction of the interface economy approach outlined above is that such differences in the unmarked stress-assignments available will correlate with differences in the acceptability of particular stress-shifts in these languages (when keeping the intended interpretation constant). An often-cited alleged instance of such a test-case is the English vs. Italian data in (6) and (7) below (noted by Cinque 1993 and discussed in the interface economy context in Reinhart 1995). Italian, in contrast to English, is a language that in addition to the English-type SV(O) structure, can generate an alternative constituent structure in which the subject appears as the most deeply embedded element of the intransitive clause, i.e., can leave the subject in the Spec of VP, and overtly raise V to I. The post-verbal subject will then be assigned the main stress of the clause by Cinque's general stress rule. Since in the corresponding English sentence no post-verbal subject is permitted, the interface-economy account of Focus predicts a systematically different status for stress-shift to the pre-verbal subject in English vs. in Italian SV clauses. As shown by the contrast between (6) and (7b) below, both being intended to be IP Focus (i.e., appropriate for "out-of-the-blue" contexts), this prediction is indeed borne out. Given an out-of-the-blue-context, stress-shift to the subject in the Italian SV clause (7b) is unaccaptable, in contrast to the full acceptability

of the same stress-shift to the subject in English.[1] In Italian, only (7a) is appropriate in this case.

(6)   JOHNSON died.

(7)   a.   E' morto JOHNSON.
        b.   #JOHNSON è morto.

Under the interface economy account, appealing to the marked stress-shift operation possible in English (as in (6)) is unacceptable in Italian due to it being an unjustified economy violation given the availability of the more economical (unmarked) option (7a).

In addition to such cross-linguistic predictions made regarding variation in the acceptability of marked/shifted stress, this stress-based account of Focus, in conjunction with interface economy, is shown in Reinhart (1995) and Neeleman and Reinhart (to

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[1] As noted by an anonymous referee, examples like (6) and (7) involve some apparent problems for Reinhart's (1995) proposal that she fails to address. The particular issue arising is why stress-shift to the subject in cases like (6) in English is permitted with an IP Focus interpretation in the fist place, i.e., why is the use of this stress pattern — considered marked under Cinque's general stress-assignment system — not limited to be used to create the otherwise unavailable **narrow subject Focus** interpretation. While this may look like a clear counter-example to Reinhart's interface economy treatment of Focus (built on Cinque's unmarked stress-assignment procedure), this is not necessarily so. As discussed explicitly by Neeleman and Reinhart (to appear), the creation of a new Focus option is not the only conceivable motivation permitting an uneconomical (marked) stress-shift operation in a derivation. In fact stress-shift is demonstrated in their study to be able to serve other, alternative interface needs too — arguably independent of modifications of the Focus set. In the context of their discussion of "anaphoric destressing", they motivate such an independent interface principle:

(i)   (= Neeleman and Reinhart (to appear, (64)))
        A DP is destressed if and only if it is D-linked to an accessible discourse entity.

The question then becomes what possible interface need might be served by the shifting of stress from the verb to the subject in some English intransitive (unaccusative) clauses like (6). Since the resolution of this particular issue is not directly relevant for the observations and argumentation of the present study, I will leave this question open here.

Another question raised by the above data is why Italian permits (7b) at all under interface economy, i.e., why it is in fact acceptable, as a **subject Focus** sentence, in spite of the availability of (7a) exhibiting subject Focus as an option under the unmarked stress pattern. This however is only an apparent problem for the interface economy account of Focus. As noted by Zubizarreta (1993) regarding cases similar to (7b) from both Spanish and Italian, the stressed preverbal subject can only be contrastive, but not identificational or presentational focus. It is argued in Rizzi (1995) that Italian has a left-peripheral "designated Focus position", i.e., an A-bar Spec position, which is specific to **contrastive** focus. As I point out in Section 6.2 below, movement to this position seems to fall under the type of analysis motivated in the present paper (see sections 4, 5 and 6) for Hungarian "designated Focus". Under this analysis of such A-bar movement constructions (as will be seen below), clearly no unmotivated stress-shift would be involved in the Italian stressed preverbal subject clauses.

appear) to also provide an elegant account for the set of syntactically very problematic conditions observable on the object-scrambling phenomenon of Dutch. It is argued to be a base-generated variant of the non-scrambled (Adv Obj V) order, and the curious apparent grammatical restrictions on the acceptability of each of the two structural variants are reanalyzed as consequences of the two receiving distinct stress-assignments, hence yielding different Focus options at the interface, without resorting to uneconomical stress-shift operations.

A further instance of the rich empirical consequences of this stress-based conception of Focus, which will be of use also in Section 5 below, involves the often-cited distinction between "broad" ("projecting") vs. "narrow" Focus. The specific prediction this account makes is that "narrow" Focus — i.e., Focus not being available on all the constituents containing the main stress — arises just in case an uneconomical stress-shift operation took place in the derivation **that was motivated by the need to create an otherwise unavailable Focus option**. Consider for instance (4a) above, involving stress-strengthening on the subject, which otherwise would not be a possible Focus. The fact that the IP in (4a) would not be a possible Focus (in any context), even though it does contain the main stress, follows straightforwardly from the interface economy view: IP is part of the Focus set of the clause **without the application of stress-shift** (as in (4b)), hence this Focus option does not justify the use of an uneconomical derivation.

In sum, Reinhart resolves the "markedness" issue, and presents substantial empirical evidence in favour of the conceptually appealing minimal PF-interface account of Focus. However there still seem to be reasons to resort to direct syntactic encoding. Most prominently, these involve syntactic movements apparently serving to create particular Focus options, or being triggered by Focus (see (1b–c) and (1d) above).

2. Syntactic movements and the PF interface

There appear to be a variety of "Focus-related" movements postulated in the syntactic literature that may make the adoption of any purely interface-based account of Focus seem impossible. For convenience of discussion, they can be divided into two descriptive classes: overt "**Focus-accommodating**" (Type A) movements and overt/covert "**Focus-licensing**" movements (Type B). Type A (Focus-accommodating) movements are overt movement operations that appear to be optional, and whose only detectable effect is with respect to the Focus-interpretations available for the sentence. In contrast, Type B movements — which will be discussed in the following sections — are movements that have been claimed in the literature to be **required for the licensing** of Focus on constituents, and languages allegedly vary as to whether this Focus-movement takes place covertly (as claimed for English "in situ" Focus e.g. by Chomsky 1976, Brody 1990), or overtly (as claimed for the cases of "designated Focus" languages, such as Hungarian, Basque, Aghem, Kikuyu, Korean, etc. by Horvath 1986, 1995; Brody 1990; Choe 1995, and others).

Both types of Focus-related movements seem potentially problematic for a PF-interface- and interface economy-based theory of Focus, since unlike in the case of **base-**

generated syntactic alternations involving Focus-effects — as the cases of Dutch object-scrambling, and Italian pre-verbal vs. VP-internal subjects —, here actual syntactic movement operations appear to crucially depend on or be motivated by Focus. There appear to be only two ways that such cases of syntactic movement can be consistent with a purely PF-interface view of Focus: (i) if it can be shown that in fact they are on a par with, i.e., functionally equivalent to, the marked "stress-shifting" operations of C_{HL} postulated within the Cinque/Reinhart theory of Focus, namely, that they too provide otherwise unavailable options for main clausal stress, and hence for Focus; or (ii) if it can be shown that the apparent "Focus-movement" is in fact driven by something other than Focus, i.e., by some independently motivated formal feature of the syntax.

Turning first to Type A movements, they arguably fall under option (i). Consider for instance the following cases:

(8)　*Directional/Locative Inversion Constructions*
　　　(see Rochemont 1978, Collins 1997)
　　　Into the house ran [JOHN]. (vs. [John [ran [into [the HOUSE]]]].)

Zubizarreta's (1993) PF-driven movements, e.g.:

(9)　*Light Predicate Raising* (see Larson 1988)
　　　Max *talked about Bill* [to MARY] *t*
　　　(vs. Max talked to Mary about BILL.)

(10)　*Object-scrambling in Spanish*
　　　Rompió *el vidrio* [PEDRO] *t*
　　　broke　the window　PEDRO
　　　'PEDRO broke the window.'

As suggested already by Zubizarreta (1993) regarding cases (9) and (10), these constructions can be motivated by PF/stress considerations, involving Focus. The optional movements involved, — e.g. PP-raising to Spec,TP and the resulting need for the extra covert raising of the subject for Case-checking in (8) (see Collins's 1997 analysis), V'-reanalysis (and V-raising) in (9), object-scrambling over the subject in (10) — all result in a surface configuration yielding a new stress-pattern, and hence otherwise unavailable Focus options, as indicated above by the bracketing. Thus, these uneconomical ("marked") movements take the place of the otherwise needed marked stress-shifts.[2] If

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[2] It is important to emphasize here that while such movement operations as in (8), (9) and (10) are motivated by PF-interface needs (involving stress and Focus) both according to Zubizarreta (1993), as well as according to the stress-based interface economy account of Focus I suggest in the text, this is not to be taken to mean that the movements themselves are assumed to take place outside of the C_{HL}, in the PF component. Both under Zubizarreta's proposal and under my own analysis, these movements are claimed to be operations of the syntactic derivation, hence are in fact expected to exhibit familiar properties of syntactic movements (e.g., island-sensitivity), and to have an effect on LF representations (e.g. to affect quantifier-scope, etc.). They differ from other movements of the C_{HL} only in that they are not driven by a need of feature-checking. Under the proposal adopted above, these are undriven, hence uneconomical ("marked") operations within the syntactic

so, then such (Type A) movements are in fact consistent with a Cinque/Reinhart-type PF-interface theory, as long as it incorporates the claim that an optional movement operation is not more costly than an optional stress-shift operation in C_{HL} in terms of economy. (Whether these two marked options are always equivalent, hence they are freely available as choices in the particular derivations, and other questions regarding their possibly distinct use would necessitate further empirical work, and are left for future research.) We thus may conclude that the existence of Type A movements, conspiring to result in new locations for the main stress and yielding corresponding (narrow) Focus interpretation on the item bearing it, actually provides further support for a stress-based account of Focus read off at the interface.

3. Alleged Focus-licensing (Type B) movements and "designated" Focus positions

In contrast to Type A movements discussed above, the class of alleged "Focus-licensing" (Type B) movements appear to be truly inconsistent with a purely PF-interface-based notion of Focus. Clearly, neither Chomsky's (1976) LF-raising proposal for "in situ" Focus in languages like English, nor the overt Focus-movements (to some clausal Spec position) proposed for "designated Focus" languages in the syntactic literature could be viewed as being motivated by the preference to preserve the unmarked clausal stress assignment while creating certain Focus-options. They indeed seem to involve direct syntactic encoding of Focus. Yet, this conclusion will be shown below to be premature. We will argue first that in situ Focus in the English-type case involves no (covert) movement of the Focus constituent, and in the subsequent sections, it will be demonstrated that even the well-known overt Focus-movements to a designated Spec position — as in the Hungarian-type case — are in fact not triggered or driven by Focus (as a syntactic feature/morpheme).

An LF-movement-based account for in situ (prosodic) Focus in the English-type languages (such as Chomsky's 1976 and Brody's 1990) turns out to face some major syntactic problems. Even its most plausible subcase, namely Focus on a DP (as opposed to e.g., V or VP Focus), manifests syntactic behavior inconsistent with the hypothesized covert movement.[3] Specifically, it exhibits no ECP effects and no (subjacency-induced)

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derivation that give rise to a legitimate derivation only if their application satisfies some specific interface need that would not get satisfied in the same derivation without a marked operation.

[3] The evidence against the LF-movement derivation for Focus presented in (11) and (12) still leaves us with the apparent WCO effects arising in the case of Focus (pointed out first in Chomsky 1976). This has traditionally been taken as evidence for the quantificational nature of Focus and for an LF-movement (QR) derivation. If one indeed were to reanalyze Focus itself as an interface phenomenon unencoded in C_{HL}, hence not constituting an operator undergoing A-bar movement — as we propose in the present study -, then the alleged WCO cases will have to be accounted for in some alternative way. A promising direction for such an alternative account is suggested by the contrast that appears to exist between the kind of WCO evidence traditionally

island effects, as demonstrated by the Focus constituents (marked by bracketing) in (11) and (12) below.

Q: Do people wonder where Mary was last night?
(11) No, people wonder where [Mary's BOYFRIEND] was last night.

Q: Have you shown Bill the book that I gave you for your birthday?
(12) No, I have (only) shown him the book that you gave me for [CHRISTMAS].

Notice that the apparent insensitivity of the alleged covert Focus movement to such constraints cannot be attributed to the option of (heavy) pied-piping in the LF-component. First, under the assumptions of the MP (Chomsky 1995), covert movement is necessarily movement of formal features only, so no pied-piping option exists at all. More importantly, even if covert movements were permitted to pied-pipe, in the above cases one would actually need to assume pied-piping that is not attested even in the case of corresponding overt movements, such as overt *wh*-movement (with the *wh*-word occupying the position of the Focus constituent e.g. in (12)). This would constitute an inexplicable asymmetry between the overt and covert parts of the derivation. For the above reasons, the postulation of covert Focus movement of in situ Focus has to be rejected. Consequently the English-type in situ Focus provides no motivation for the direct syntactic encoding of Focus.

4.   The challenge of overt Type B "Focus Movement": the strongest apparent evidence for the syntactic encoding of Focus

4.1   *Evidence for syntactic A-bar movement to a "Focus-position" and its landing site*

Hungarian provides the most widely-recognized instance of a language claimed to have a designated structural "Focus-position" to which Focus constituents must move by true

cited for Focus given in (ia,b) vs. examples like (ii) (capitalization indicates the word bearing the main stress of the clause):
(i)   a.   His$_i$ wife DENIED the rumors about John$_i$.
       b.   *His$_i$ wife denied the rumors about JOHN$_i$.
(ii)   The rumors about JOHN$_i$ were denied by his$_i$ wife.

The possibility of coreference manifested in (ii) vs. the impossibility of the same in (ib) shows that it is the linear order of the pronoun and the Focus constituent, not their c-command relation that is involved here (both in (i) and in (ii), the position of the Focus constituent and the pronoun bear no c-command relation to one another). The irrelevance of the lack of c-command relation between the alleged bound variable and the corresponding pronoun in (ii) suggests that in the case of focused DP antecedents, it may be a **discourse principle** of anaphora — involving the inaccessibility of a newly introduced antecedent following the pronoun — that creates the impossibility of anaphoric relation, rather than a principle of variable binding. Crucially, this is in contrast to the true, uncontroversially quantificational WCO cases. The above issue clearly deserves further research; this however is beyond the scope of the present study.

syntactic movement. Since we will take up below the challenge such a case would pose for any purely PF-interface-based view of Focus, first we need to check whether the syntactic alternation under discussion is indeed syntactic movement, and cannot be reanalyzed as a base-generated "scrambling"/"free word order" effect. The data below show that the process involved is not clause-bounded (see (13)), exhibits subjacency effects (see (14)), and licenses PGs (see (15)), hence it clearly is a syntactic movement, forming an A-bar chain:

(Q: Kinek   hallottad hogy János   kölcsönadott 2000 dollárt?)
      whom-to heard-2sg that   John-nom loaned $2000
      'To whom did you hear that John had loaned 2000 dollars?'

(13) [MARINAK] hallottam hogy János   kölcsönadott 2000 dollárt.
      MARY-TO   heard-1sg that John-nom loaned $2000
      'I heard that John had loaned 2000 dollars to MARY.'

(14) *MARINAK hallottam a   hírt   hogy János ´   kölcsönadott 2000 dollárt.
      TO-MARY heard-1sg the news-acc that John-nom loaned $2000
      ('It's to MARY that I heard the news that John had loaned $2000')

(15) a.   [*AZ OSZTÁLYTÁRSAIT*]   hívta   meg János *t*   vacsorára
         THE CLASSMATES-HIS-ACC invited Perf John-nom dinner-to
         még mielőtt bemutatta   volna *pg* a   szüleinek.
         even before introduced-3sg cond.   the parents-his-to
         ('It's HIS CLASSMATES that John had invited *t* for dinner even before he
         would have introduced *pg* to his parents') vs.

     b.   János   meghívta   az osztálytársait   vacsorára
         John-nom Perf-invited the classmates-his-acc dinner-to
         még mielőtt bemutatta   volna *(őket) a   szüleinek.
         even before introduced-3sg cond. (them) the parents-his-to
         ('John had invited his classmates for dinner even before he would have
         introduced *(them) to his parents')

The next question is whether or not the landing site of the above apparent "Focus-movement" is a position that is consistent with clausal main stress assignment to the Focus element under the unmarked stress rule (see (2) above), as was the case with Type A movements.

    Given the above phenomena, and the arguments regarding the landing-site of Focus-movement in the literature, we can conclude that it is **an A-bar Spec position** — left adjacent to V (due to V-raising) — that crucially is **located outside of the VP, namely in the Spec position of a clausal functional projection (FP or IP) above VP** (see Farkas 1986, Brody 1990, Horvath 1995, Kenesei 1995). Thus the unmarked stress rule could not account for the fact that the preposed constituent bears main stress, and it is interpreted as the (narrow) Focus of the sentence (see e.g., (13) and (15)). Such "Focus-movement" (Type B) cases then would need a marked operation of stress-shift in their derivation under the Cinque/Reinhart PF-interface view of Focus. But if so, then why should there be movement to such a position in the first place? Clearly, the movement itself cannot be

justified by any interface economy consideration of conforming to the automatically given (unmarked) stress pattern and avoiding the marked stress-shift (unlike e.g. Zubizarreta's (1993) cases in (9)–(10) above). Notice that even the most deeply embedded complement of V (as in (13), (15)), normally receiving main stress in situ, undergoes this movement, even though according to the Cinque/Reinhart hypothesis, these could be Focus in their original position. In sum, it looks like these cases involve both unnecessary movement and marked stress shift. So prima facie, the Hungarian-type "Focus-movement" is the clearest kind of evidence against a uniformly stress-based, interface conception of Focus; it suggests the need for encoding Focus directly in the C_{HL}.

4.2 *The checking theory scenario of Focus*

In view of the above facts, the best option may seem to be to adopt a proposal for Focus encoded in the C_{HL} that has in fact been made independently and is widely assumed in the framework of the MP: an account construing Focus as a formal feature in the syntax undergoing checking (on the evolution of this conception, see 1.1 above). Under this alternative, C_{HL}-internal view of Focus (see Brody (1995), Kenesei (1995) and related work), a formal feature [+Focus] is freely assigned to some items in the Numeration, and an item marked [+Focus] moves to the Spec of F(ocus)P, attracted by the uninterpretable feature [+Focus] of the head F^0, where checking takes place. (It is claimed that the verb in Hungarian adjoins to the F^0-head, resulting in adjacency to the Focus-moved phrase.) Furthermore, Brody (1995) assumes that the [+Focus]-feature is strong in the Hungarian-type languages — hence the overtness of Focus-movement — and it is weak in the English-type in situ Focus — hence the alleged movement takes place after Spell-out (for problems with the latter, see 3 above). Under this view, the [+Focus] feature of the syntax triggers the assignment of main stress on the item that bears it; at LF it is assumed to act as an operator, following Chomsky's (1976) proposal. The fact that what moves by Focus-movement is often not just the item bearing [+Focus], and hence main stress, but rather some larger phrase properly containing this item is attributed to pied-piping, on the analogy of *wh*-movement cases.

One immediate question arising here is: if this is the proper conception of Focus in UG, then what is the status of "neutral" IPs with projecting Focus (as discussed in Cinque 1993), and of the evidence for a PF-interface account for Focus (presented e.g. in Zubizarreta 1993 and Reinhart 1995)?

There have been some attempts — in particular, in Kenesei (1995) and É. Kiss (1996) — to reconcile the case of "neutral"/broad Focus phenomena with the alleged (overt) "Focus-movements" to Spec of FP attested in the Hungarian-type languages **by postulating two distinct types of Focus**, meant for capturing both cross-linguistic and language-internal variation observed among Focus-constructions. These proposals introduce a dichotomy between (i) "contrastive"/"operator" Focus (involving [+Focus]-checking, as in the Hungarian-type Focus-movement) and (ii) "presentational"/"information" Focus (involving a possibly purely stress-based account, as e.g. in English in situ Focus). However, it will be argued below that neither a uniformly C_{HL}-internal account, nor the above split — stress-based PF-interface and Focus-checking-based C_{HL}-internal — account is tenable.

5. Alleged "Focus-checking" (=Type B) movements: evidence against the direct encoding of Focus in the C_{HL}

One major type of evidence arguing against the direct syntactic encoding of Focus even in the prima facie obviously Focus-checking-based case of Hungarian overt "Focus movement" — and hence also against the above split ("operator" vs. "information") Focus proposal — emerges when we examine cases of "Focus-movement" involving alleged pied piping of material other than the item bearing the main stress and carrying the syntactic feature [+Focus] under the syntactically encoded (checking-based) account.

Webelhuth's (1992) descriptive generalizations about pied piping (see (16)) — based on *wh*-movement cases — turn out to be freely violated by the alleged Focus-checking movement of Hungarian.

(16)   *Webelhuth's (1992) pied piping generalizations:*
    a.   A modifier is not a pied piper.
    b.   A theta-marked phrase is not a pied piper.
    c.   Non-theta-marked specifiers (of nonclausal categories) are pied pipers.

Importantly, within the same language (namely Hungarian), we find **a clear discrepancy between the freedom of apparent pied piping by alleged [+Focus]-feature-bearing items and the restricted options of pied piping (conforming to generalizations (16)) by *wh*-morphemes**. This is demonstrated below by the contrast between cases of *wh*-pied-piping as in (17a,b) and (19a,b) vs. the corresponding structurally parallel alleged [+Focus]-pied-piping cases shown in (18) and (20), respectively. Notice that even when relative *wh*-pronouns — known to be highly permissive as pied-pipers — fail to induce pied-piping, the alleged pied-piping by [+Focus] in the same structure gives fully grammatical results (cf. (17a) vs. (18) and (19a) vs. (20)).

(17)   a. *a   filmszínésznő *néhány **akiről***   írt   könyvet láttam *t*
          the movie-actress some   whom-about written book-acc saw-1sg
          a   polcon …
          the shelf-on
          ('the movie-star a few books written **about whom** I saw on the shelf …')
    b. *Néhány **kiről***   írt   könyvet láttál *t* a   polcon?
          some   whom-about written book-acc saw-2sg   the shelf-on
          ('A few books written **about whom** did you see on the shelf?') vs.

(18)   Apparent pied piping by [+Focus] within modifier:
    Néhány [MARILYN MONROERÓL] írt   könyvet láttam *t*
    some   M.   M.-about   written book-acc saw-1sg
    a   polcon.
    the shelf-on
    'It's a few books written about **MARILYN MONROE** that I saw on the shelf.'

(19) a. *az ital *amit* *követelő* *vendégektől* fél
the drink which-acc demanding guests-from fears
a pincér *t* ...
the waiter-nom
('the drink customers demanding **which** the waiter is afraid of ...')

b. *mit* *követelő* *vendégektől* fél a pincér *t*?
what-acc demanding guests-from fears the waiter
('Customers demanding **what** is the waiter afraid of?') vs.

(20) *[BARACKPÁLINKÁT]* *követelő* *vendégektől* fél a pincér *t*.
apricot-brandy-acc demanding guests-from fears the waiter
'It's customers demanding **APRICOT BRANDY** that the waiter is afraid of.'

The pied-piping contrast between (17)–(19) and (18)–(20) indicates that **what drives this "Focus-movement" is not the postulated formal feature [+Focus]** borne by the capitalized elements in (18) and (20), contrary to what is assumed under the C_{HL}-internal, [+Focus]-checking-based conceptions of Focus.

Apart from the above facts, there are further observations suggesting that the postulation of a feature [+Focus] for Type B movement constructions in the syntax, serving as the basis for PF stress-assignment and for Focus interpretation at LF, is actually inadequate even independently of the issue of whether or not this feature itself may be claimed to drive movement under checking theory.

Consider first the following cross-linguistic generalization, noted by Gundel (1988) and Roberts (1996): both "operator Focus" and "information Focus" **necessarily involve prosodic marking**, in addition to whatever other — special syntactic or morphological — properties they happen to manifest. The question then is: why should this be the case for "operator Focus", if it indeed were a phenomenon distinct in type from "information Focus", namely, one based on a C_{HL}-internal operator feature [+Focus]? It would clearly be a curious coincidence if there was an operator-feature like this, which simply happened to be associated universally with main stress/intonation center, just like the non-syntactic PF-interface-based "information Focus" is. One may try to defend the split (C_{HL}-encoded and PF/stress-based) theory by appealing to some possible similarities in their discourse functions beyond the C_{HL} to explain their making use of prosodic prominence. But such a suggestion turns out to be implausible, in light of some further observations (see the discussion of (21) and (22)–(23) below). These involve systematic precise parallelisms with respect to the relation between stress assignment, constituent structure and the set of associated Focus options manifested **within the moved constituent of "operator Focus"** on the one hand and **within "information" Focus constructions** (as those dealt with by Cinque and Reinhart) on the other hand.

Specifically, the options for **"narrow"** vs. **"broad"/"projecting"** Focus manifested **within the preposed phrase in a Type B movement (alleged "operator Focus") case like Hungarian turn out to fall straightforwardly under the predictions of the Cinque/ Reinhart PF-interface-based hypothesis of phrasal stress and Focus**, developed by them for in situ prosodic Focus cases. Consider first the following generalizations regarding the position of stress and the corresponding Focus set, deriving directly from

the Cinque/Reinhart system of stress-based Focus in conjunction with interface economy (as outlined in 1.2 above):

(21) a. Main stress on head, or if there is one, the (head of the) complement (of/in the Focus-moved phrase): Focus is **broad**, i.e., it "projects" (but no further than the Focus-moved phrase).
b. Main stress on an adjunct or specifier (in the Focus-moved phrase): gives **narrow** Focus, i.e., Focus limited to the stress-bearing adjunct or specifier — due to marked stress-shift (strengthening).

Observe now the following data involving the Focus set (indicated by bracketing) under Type B — i.e., alleged [+Focus]-checking — movements; note in particular the "broad"/"narrow" Focus variation **internal** to the preposed (V-adjacent) phrase in the (a) vs. (b) versions of (22) and (23), and its relation to the location of main stress (indicated by capitalization).

(22) (example adapted from Kenesei 1995):
a. Anna   [a tegnapi   [*CIKKEKET*]] olvasta *t*.
   Anna-nom the yesterday's articles-acc   read
   'It's [yesterday's ARTICLES] that Anna read.'
   or:
   'It's yesterday's [ARTICLES] that Anna read.'
b. Anna   a [*TEGNAPI*] cikkeket   olvasta *t*.
   Anna-nom the yesterday's articles-acc read
   'It's [YESTERDAY'S] articles that Anna read (not today's).'
   (but not: 'It's [YESTERDAY'S articles] that Anna read (not some short stories).')

(23) a. János   a [[*NÉPDALOKAT*] *éneklő*] lányt   választotta *t*.
   John-nom the folksongs-acc   singing girl-acc chose
   'It's the girl [singing FOLKSONGS] that John chose.'
   or:
   'It's the girl singing [FOLKSONGS] that John chose.'
b. János   a [*KERTBEN*] *éneklő lányt*   választotta *t*.
   John-nom the garden-in   singing girl-acc chose
   'It's the girl singing [IN THE GARDEN] that John chose (not the girl singing in the kitchen).'
   (but not: 'It's the girl [singing IN THE GARDEN] that John chose (not the girl reading in the bedroom/not our neighbour).')

The variations of main stress and Focus observable within the preposed phrase in the above data reflect precisely the generalizations in (21) that were derived directly from the Cinque/Reinhart proposal of stress-based Focus and interface economy. In (22a), the main stress being on the structurally lowest element of the preposed DP, namely the head noun, provides the options of Focus on the noun, or Focus on the whole DP (see (2) and (3)); in contrast in (22b) where main stress appears on the adjunct of the DP — hence under the Cinque/Reinhart theory of Focus, (DP-internal) stress-shift/strengthening must have applied — the only option is that the adjunct itself is the Focus, as expected based

on interface economy. The above conclusion is further confirmed by the somewhat more complex case of (23a) vs. (23b). When the main stress is on the most deeply embedded element of the adjunct participial relative in the preposed DP, namely on its complement, as in (23a), Focus can be either that complement itself, or the whole participial adjunct, but not the whole preposed DP (since within the latter, marked stress-shift from the head N to the adjunct must have applied). In (23b), where main stress is on an adjunct within the participial adjunct of the preposed DP, the only available Focus option is Focus on the participle's own adjunct ('in the garden'); i.e., neither the participial phrase containing it, nor the whole dominating DP may be taken as Focus, again, as predicted by the theory of stress-based Focus and interface economy, applying in our cases within the preposed DP.

Within a syntactically encoded [+Focus]-based conception of Focus-movement, Kenesei (1995) proposes to account for such observations (a) by stipulating that the [+Focus] feature gets assigned optionally either to lexical items (heads) entering the Numeration, or crucially, to whole XPs, and (b) by postulating for the latter cases a process of downward [+Focus] feature percolation from XP onto the head or (if there is one) the complement, to achieve correct main stress placement. These assumptions however are ad hoc complications inherent in the assignment and functioning of the alleged formal feature [+Focus]; they reveal no more than the inappropriateness of the use of a syntactic feature to "mediate" between Focus-interpretation and the concomitant stress phenomena even in the case of the prima facie syntactically encoded Hungarian-type Focus. In addition to resorting to devices inconsistent with a minimalist conception of the C_{HL} (feature-assignments to phrases, feature-percolation), this [+Focus]-based proposal clearly seems like a forced, roundabout way of reproducing — in a sense, an attempt to mimic — effects provided naturally by the Cinque/Reinhart-type stress-based PF-interface account of Focus.

Our analysis of the above data clearly indicates the relevance of the PF-interface notion of Focus (within the preposed phrase) also for the case of alleged "Focus-checking" (Type B) movements. What we still need to answer of course is why the main stress is within the preposed phrase, and why this syntactic movement takes place in the first place.

6. A grammaticalized "exhaustivity" operator (EI) and Focus as a unified PF-interface-based phenomenon

Two major conclusions from the discussion in Section 5 have been:

(a)   As the pied piping phenomena presented in (17)–(18) and (19-(20) indicated, the claim that "Focus-licensing" (Type B) movement is driven by the need to check the formal syntactic feature [+Focus] is not a tenable account even for the case that seems to provide the strongest type of prima facie motivation for a C_{HL}-internal encoding of Focus.
(b)   The hypothesis of two distinct types of Focus — "operator" Focus (involving the operator feature [+Focus]) vs. PF-based "information" Focus — misses a significant

generalization, namely the parallelism between Focus in phrases that have undergone Type B "Focus-movement" and in situ "prosodic" Focus (as analysed by Cinque and Reinhart) with respect to the relation of phrasal stress to the Focus set.

In view of these results, an adequate account for the puzzling Type B "Focus-movements" (as in Hungarian) would need to reduce Focus to a single type of phenomenon, capturing the relevance of the same stress-based Cinque/Reinhart-type notion of Focus in Type B cases as well, yet at the same time to be able to derive the obvious differences between the Hungarian-type "Focus-movement" case and purely PF-interface-based "prosodic" Focus cases (such as e.g. English in situ Focus).

This requirement turns out to be less paradoxical than it may first sound, when we observe that apart from undergoing Move/Attract, Hungarian (pre-V) Focus manifests another distinctive characteristic (not found for instance in the case of English in situ Focus). As observed in Kenesei (1995), as well as in É. Kiss (1996) and Roberts (1996), its semantic interpretation is uniformly 'exclusion by identification with respect to some domain of discourse D'. Rather than merely introducing new information, it **exhaustively identifies the proper subset of a contextually relevant set of entities as the one for which the predicate holds**. Consider the following type of contrast:

(24) Q: Kit hívtak meg?
'Who did they invite?'
  a. [*JÁNOST*] hívták meg *t*.
   John-acc invited-3pl Perf
   'They invited JOHN (and nobody else).'
vs. b. Meghívták *(például/ többek között) JÁNOST.
   Perf-invited-3pl for-example/among others John-acc
   'They invited JOHN, for example/among others.'

Examples like (24b) provide evidence that nonpreposed DP/PP Focus is in fact possible in Hungarian too, however — contrary to e.g. English in situ Focus — only when it is not intended to be an exhaustive identification of the proper subset of contextually relevant entities involved; any time the assertion involves exhaustive identification, only the (overtly) preposed version can be used (as in (24a)). In other words, Hungarian appears to have "grammaticalized" the notion of exhaustive identification (in a way that results in overt movement). Furthermore, the use of this "grammaticalized", i.e., syntactically encoded, strategy apparently takes precedence over leaving the choice of exhaustive vs. non-exhaustive interpretation open for pragmatics. Consequently, when (DP/PP) Focus is in situ, the only interpretation available is partial, i.e., non-exhaustive listing. Since the pragmatically "normal" way of providing information e.g. in contexts like (*wh*-)questions (as in (24)) is to be maximally informative, any time a less than exhaustive identification of the relevant entities is provided, namely when Focus is left in situ, as in (24b), in Hungarian, the sentence sounds well-formed only if some explicit indication of the given information being incomplete/non-exhaustive is provided (e.g., by adding 'for example' or 'among others', or at least some rising intonation on the listed element(s) signaling the list being unfinished due to problems with recall).

Further evidence for the property of exhaustive identification being associated with the pre-V (alleged) "Focus-position" of Hungarian is provided by the non-contradictory nature of the following type of coordination, pointed out originally in Szabolcsi (1981):

(25) Nem JÁNOST hívták   meg, hanem JÁNOST ÉS MARIT   (hívták meg).
       not John-acc invited-3pl Perf but   John-acc and Mary-acc (...)
       'It's not JOHN who they invited, it's JOHN AND MARY (who they invited).'
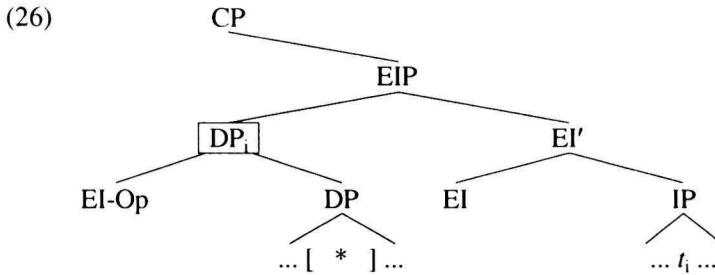   vs.#They didn't invite JOHN, but invited JOHN AND MARY.

6.1 *The proposal*

Now recall that while it was shown (in Section 4.1) that "Focus-movement" in Hungarian is a true syntactic A-bar movement operation, it has been established on the other hand (in Section 5) that it cannot be the [+Focus] feature that drives this movement, i.e., that checks a corresponding feature on a clausal functional head (see (17)–(18) and (19)–(20)), and furthermore that the postulation of an operator feature ([+Focus]) which provides Focus-interpretation at LF as well as serves to trigger the assignment of main stress at PF is descriptively inadequate. Instead the construction has been shown to involve the same stress-based PF-interface notion of Focus within the preposed phrase that in situ "prosodic"/"information" Focus has been known to exhibit (see the discussion of (22)–(23) above). These conclusions, and the observations about the special "exhaustive identification" property of the alleged Focus-checking movement construction of Hungarian suggest an alternative integrated account for this challenging Type B "Focus-movement" case, within minimalist assumptions. The proposal consists of the following basic elements:

(a) Assume that there is an **exhaustive identification (EI) operator**, and that it is this, rather than an alleged [+Focus] feature, that is **a "grammaticalized", i.e., syntactically encoded, element** in Hungarian.

(b) Focus need not and should not be directly encoded in the C_{HL} in the Hungarian-type case either; rather it is **universally a stress-based interface phenomenon**, along the lines of the Cinque/Reinhart theory of (in situ) Focus.

(c) A clausal functional head EI^0 encodes and attracts an "EI-operator feature", which — being strong in Hungarian — triggers overt movement of an EI-operator phrase into its Spec (Spec of EIP). This parallels the case of (universally) quantified phrases in Hungarian, which also undergo overt, arguably checking-driven movement. (The overt raising of the verb associated with "Focus-movement" indicates that the phonologically null EI^0 head needs to be "supported" by the verb, presumably due to its affixal nature.)

(d) The EI-operator (EI-Op), able to enter into a checking relation with the strong EI feature of the EI^0 head, is **merged as the Spec of DP (and possibly of PP)**. (This assumption is parallel to the analysis of the Q(uestion)-operator in the case of Japanese under Tsai's (1994) proposal for *wh*-interrogatives.) Hence the pied-piping facts pointed out in Section 5 are correctly accounted for: due to the location of the EI-Op in the Spec of DP (or PP) position, the DP (or PP) gets legitimately pied-piped when EI^0 attracts EI-Op to its checking domain (see (17)–(18) and (19)–(20)).

(e)   The EI-Op **requires the presence of (prosodic/information) Focus within its particular c-command domain, just like EVEN and ONLY do within theirs**; hence the apparent "Focus-phrase" nature of the preposed DP/PP constituent. This also accounts for the observations about what part(s) of that preposed phrase can actually be taken to be Focus (see (22) and (23)). Furthermore, it is the EI-Op's need to be associated with Focus that requires, and hence makes acceptable, the observed **uneconomical stress-strengthening** that shifts main stress from the most deeply embedded constituent of the clause to the higher preposed EI-Op phrase.

To illustrate our proposal, consider the schematic representation of "Focus-movement" (the asterisk indicates main stress on an item):

(26)

```
                        CP
                          \
                          EIP
                        /     \
                  ┌─────┐       EI'
                  │ DPᵢ │      /    \
                  └─────┘    EI      IP
                 /      \    |       /\
            EI-Op       DP  ...   ... tᵢ ...
                        /\
                     ...[ * ]...
```

The above proposal accounts for the particular syntactic A-bar movement observed in this (Type B) Focus construction, yet preserves the generalization that Focus is a unified, universally stress-based interface phenomenon, and that it demonstrably acts like that also in this alleged "Focus-checking" construction. Our account makes crucial use of the split introduced between Focus and an independent operator (EI-Op), whose only relation to Focus is that it needs to be associated with a Focus element within its c-command domain, similarly to the well-known cases of items like ONLY and EVEN. Striking further evidence for the independence of Focus and EI-Op, and for the claim that it is not Focus, but a clausal head EI^0 (with a strong EI feature) that drives overt A-bar movement in the Hungarian-type case is provided by the contrasting behavior of phrases with *csak* 'only' and phrases with *még...is* 'even':

(27) *csak 'ONLY'*:
    a. Csak [JÁNOST] hívták   meg *t.*
          only   John-acc   invited-3pl Perf
          'They invited only [JOHN].'
    b. *Meghívták/hívták   meg csak JÁNOST.
          Perf-invited-3pl/invited-3pl Perf only John-acc
    c. *Csak meghívták/hívták   meg JÁNOST.
          only Perf-invited-3pl/invited-3pl Perf John-acc

(28) *még ... is 'EVEN'*:
    a. Meghívták   még [JÁNOST] is.
          Perf-invited yet John-acc   also
          'They invited even [JOHN].'

b. *Még [JÁNOST] is   hívták   meg *t*.
   yet   John-acc   also invited-3pl Perf
   ('Even JOHN invited they.')

As in other languages, both *csak* 'only' and *még...is* 'even' need to be "associated with Focus"; but while *csak* has the semantic import of exhaustivity, *még...is* is semantically incompatible with exhaustive identification. Thus, the contrast between (27) showing obligatory preposing of the *csak*-phrase containing Focus and (28) showing the impossibility of preposing the *még...is*-phrase also containing Focus is precisely what our proposal would predict, and is contrary to what a Focus-checking hypothesis would predict.

6.2 *Some further issues*

The arguments presented above against the C_{HL}-internal encoding and for an interface-based account of Focus even in the case of prima facie syntactic "Focus-licensing" (Type B) movements were based on evidence from Focus in Hungarian, which is probably the best-known such case. Yet, a question naturally arising at this point is to what extent the above conclusions regarding the status of Focus carry over to other apparent Type B Focus-movement cases. Specifically, one may wonder (a) whether alleged "Focus-licensing" movements across languages can always be shown to be driven by something other than the checking of a syntactic feature [+Focus] (in the sense discussed above), and (b) if so whether what drives such movements is always the formal feature of the clausal functional head EI^0, as in Hungarian. While due to limitations of space we cannot address this issue here, there are indications of an affirmative answer to question (a), and possibly a negative answer to (b). In languages with "designated" Focus positions and overt A-bar "Focus-movement" such as e.g., Basque, Italian, Greek, Standard Arabic, Catalan, etc. (see Echepare 1997, Rizzi 1995, É. Kiss 1996), the preposed phrases have been shown to involve some systematic extra semantic function beyond just being "new information" in the discourse, such as Contrastivity (in Italian, Greek, Standard Arabic, Catalan), and Emphatic (exclamative) force (in Basque).

Another question one may raise based on the above proposal is whether the postulated EI^0 clausal functional head is uniformly strong (hence triggers overt movement, whenever projected), or it may in some languages be weak, and thus trigger **covert** movement of the EI operator feature of a phrase. The case of in situ Focus of DP/PP in English for instance appears to be vague, rather than ambiguous, with respect to exhaustive identification, and the cases where it gets interpreted exhaustively seem to provide no clear syntactic evidence for covert raising. Yet, especially in light of the WCO effects observed in Chomsky (1976), this issue is still open, even for the case of English.

Finally, the "grammaticalization" of the notion of exhaustive identification by the clausal head EI^0 (at least in some languages) proposed above raises the question of the status of the cleft and pseudocleft constructions in languages like English. In contrast to in-situ/prosodic Focus, the latter two constructions do exhibit an implication of exhaustiveness. Thus one may ask whether their analysis should also involve movement to the Spec position of an EIP for feature checking on EI^0. (É. Kiss (1996) for instance claims

that at least the English cleft construction actually has the same Focus Operator in the same Spec of FP checking the [+Focus] feature as she assumes for Hungarian "Focus-movement".) However, as I have argued in my talk at the Amsterdam Colloquium on Interface Strategies (September 24–26, 1997), the cleft and pseudocleft constructions in fact should not be assigned an EI-Op-based analysis, contrary to our account for Hungarian. They are distinct from the case of Hungarian exhaustive identification in ways suggesting that they do not involve a quantificational (EI-Op) element, and their exhaustive identification property is not to be attributed to the presence of a functional category EI^0, but rather to a **non-grammaticalized** version of expressing exhaustive identification: the use of an equative (identificational) construction, based on the copula BE.

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